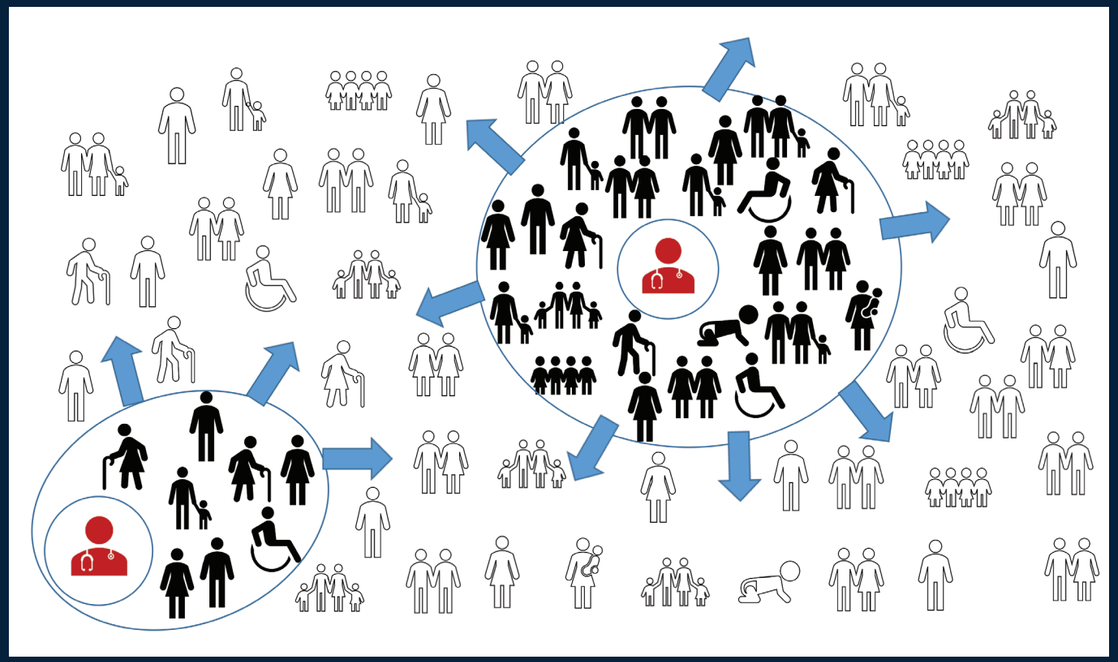
Coverage of COACHES



Helping Japanese communities affected by natural disasters

*A team based at the **University of Kochi** in Japan is conducting research that seeks to develop a Community Oriented Approach for Comprehensive Healthcare in Emergency Situations (COACHES). The findings will help to provide more efficient and optimised relief to those affected by emergencies and disasters*

Japan has a high prevalence of natural disasters. There are several reasons why this is so, including the weather resulting from Japan belonging to the Asian monsoon climate region; its terrain - with some 70 per cent of Japan's land mass being covered by mountains or hills; and urban development - where because of population growth and urbanisation, the non-mountainous areas in Japan are often expanded through reclaiming coastal areas. However, the location of Japan is arguably the most important reason why natural disasters occur so often when compared to other countries and regions around the world. Given all of this, it is essential that local and national governments, as well as other organisations, develop effective means of handling the impacts of disasters and the emergencies that are a direct result from these.

THE WHOLE PICTURE

It is with this in mind that a research team with faculty members from different fields at two universities has embarked on its current studies. The team is led by Professor Mari Kinoshita, who has helped to propose a system known as the Community Oriented Approach for Comprehensive Healthcare in Emergency Situations (COACHES). It is hoped that through research and development, COACHES will be implemented across Japan and lead to more effective and efficient responses to the effects of disasters and emergencies.

Kinoshita describes how currently neither public agencies nor relief workers start organising emergency relief with real-time and reliable information about the disaster-affected population. She says they usually count on an estimation based on data collected in the past or unreliable information reported by non-professionals through a variety of sources, and they do not attempt to fully enumerate the affected population as they do not have proper measures available. 'There are attempts to collect information by self-reporting systems, but they may fail some of the urgent needs because some are ignorant of their conditions, or some are uncomfortable reporting their conditions too urgently,' explains Kinoshita. 'As a consequence, relief efforts give priority to larger, visible and the closest populations.' The COACHES project is designed to detect hidden or missed data and provide a whole picture of the situation to be able to provide more optimised relief.

DATA WITHOUT COMPROMISING PRIVACY

Put simply, COACHES works by providing information to relief personnel that is vital in an emergency situation. Importantly, it provides data on where the affected people are located, but also how they are doing at the present time. This enables the rescue and relief teams to determine a list of priorities in terms of who requires attention urgently and those who might be able to wait a little longer. 'The system records everyone's data so that it can be viewed later and analysed; this facilitates a process of continuous improvement, where responses can be fine-tuned and made better for the next incident,' observes Kinoshita. The system directly collects data from all affected individuals on an anonymous basis.

During a disaster, data-collecting volunteers check the health conditions of those around them, including themselves, their families, neighbours and anyone they meet on the way to the evacuation shelter. This information is then recorded on an exclusive database using a web-based application which is then shared among public and private agencies and rescue organisations to check the real-time situation. 'For the protection of privacy, the COACHES system does not collect personal identity, but instead, an individual is identified by scanning the personal identification codes with the data collector's mobile devices,' highlights Kinoshita. 'The QR codes will be distributed by local authorities with the help of community volunteers to every individual in a disaster-affected area. This anonymous system reduces the time and risks of data collection, thereby providing peace of mind to individuals and encouraging them to use the system,' she says.

TOGETHER EVERYONE ACHIEVES MORE

As it stands, the system is currently still in the planning phase and therefore cannot yet be tested in a real-life situation. However, the research has shown a huge amount of promise so far and once it has been fully developed it will provide a much-needed solution. There are some technical challenges that need to be overcome to make the system feasible and cost-effective, specifically damage to communication infrastructure and power supply disruption. 'The power supply can be manageable by batteries and generators, but for the communication networks, we need collaboration with partners that are capable of providing communication technologies during disasters and emergency situations,' outlines Kinoshita. 'Another challenge is how to find volunteers in the disaster-affected community in an early phase of an emergency, especially given that the system heavily relies on volunteers. The essential part of the system does not run and cover the whole area without volunteers for the distribution of personal ID (QR) codes and data collection,' she comments.

> *'This anonymous system reduces the time and risks of data collection, thereby providing peace of mind to individuals and encouraging them to use the system'*

Despite these challenges, Kinoshita and the team are confident that with the help of members of society and various collaborative efforts they will soon be able to overcome the present hurdles and deploy a system that helps individuals and communities who are affected by disasters. Indeed, they believe that the public sector needs to be involved from an early stage because they will play a leading role in introducing the system to their respective communities. It will only be through using the system that people gain confidence in it, so success is expected to snowball in the future. ●

Sample front page of COACHES App. (iPhone)

Project Insights

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COLLABORATORS

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- Nakatosa Town, Kochi, Japan
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TEAM MEMBERS

University of Kochi – M Nakai, I Shimada, M Mukai, Y Kouchi
Kochi University of Technology – M Shikida
Nakatosa Town – K Iwase, Y Nakahira

CONTACT

Professor Mari Kinoshita

T: +81 88 847 8700
E: kinoshita@cc.u-kochi.ac.jp
W: https://www.u-kochi.ac.jp/site/research/kinoshita-mari.html

Mari Kinoshita is a professor of disaster and international nursing. She advances programmes and research that improves quality of care in complex emergencies and relief of affected populations in the community. Kinoshita's research interests include rapid health assessment, healthcare risks in disasters, refugee healthcare and community level infectious disease care.

高知県立大学 University of Kochi
高知工科大学 Kochi University of Technology
ELP Electric Parts Kochi